



## World's Largest Bubble Chamber Tested at NAL

The world's largest liquid hydrogen bubble chamber was successfully operated for the first time at 5:15 p.m., Saturday, September 29, at the National Accelerator Laboratory (NAL) near Batavia, Illinois. This heralds the start of a program that promises to shed new light on an extremely important area of physics.

"NAL is to be congratulated on their achievement," said BNL Director George Vineyard. "We are also proud that so many people from Brookhaven have played a key role in the development and construction of the 15-foot chamber."

A highly-skilled team of technicians and scientists had worked round the clock for days to fill the chamber with liquid hydrogen. As the chamber filled, it was possible to look down, with the aid of a periscope, into the pool of colorless, very cold liquid, boiling near absolute zero.

Expansions were begun very carefully when the chamber was brought into operation on the 29th. At first, piston motions of only a small fraction of an inch were used. The system was watched carefully for any small motions that might indicate a misalignment. Gradually, as confidence built in the system, the piston stroke was increased. Right at the correct stroke length, particle tracks became visible in the liquid, signaling the successful commissioning of the NAL 15-Foot Bubble Chamber.

NAL's 15-Foot Bubble Chamber Group is led by Dr. William Fowler, one of the world's leading bubble chamber authorities. Prior to joining the staff at NAL, Dr. Fowler had been a central figure in the very successful bubble chamber team at Brookhaven National Laboratory, where efforts led to the discovery of the Omega Minus particle. Also playing a key role in the design and construction of the NAL chamber were physicists Russ Huson and George Mulholland, both former members of the BNL physics staff. They brought together at NAL an outstanding team of scientists and technicians, many with years of bubble chamber experience, for the complex and painstaking assembly and testing of the 15-foot chamber.

The new chamber is located at the end of the NAL Neutrino Line, an experimental area which extends more than one and a half miles and is tangent to the Main Accelerator Ring of the National Accelerator Laboratory. The chamber control room in the Bubble Chamber Assembly Building is identified by its multi-colored polyhedron dome made out of recycled cans and fiberglass. The accelerator is the largest particle accelerator in the world. It has been in operation for more than a year. The 15-foot bubble chamber is the latest component of the detection equipment of the Laboratory to be completed.

The 15-foot bubble chamber has been under construction at NAL for the last three years. A group of laboratories led by NAL contributed to the construction. Argonne National Laboratory, southwest of Chicago, built the large superconducting

### Hydrogen Storage



Andy Wolke, DAS, checks final assembly of components of a hydrogen storage unit built for testing by the Public Service Electric and Gas Company of New Jersey.

## They're Coming!

Flying saucers? No... but a week from tomorrow about 5000 people will storm the gate of BNL for our Annual Visitors' Days. Tickets are not necessary for the 27th of October, but are needed for entry on High School Visitors' Day on November 3.

Are you going to join the crowd? Why not bring a neighbor along to see our gala Science Fair on Visitors' Day!

electromagnet that surrounds the chamber. This magnet had been tested at full magnetic field of 30 kilogauss about a year ago. For the Saturday test, the magnet was not put into operation.

The expansion system was built by the Stanford Linear Accelerator Center in Palo Alto, California. Many industrial firms, including Cryogenic Consultants, Inc., and Battelle Memorial Institute, contributed to the design and construction. The overall cost for the bubble chamber system was seven million dollars.

Over the years, bubble chambers have grown enormously in size and effectiveness. Roughly half of the discoveries in sub-nuclear physics have come about through the use of photographs taken in these instruments.

A particularly famous case was the discovery of the Omega Minus particle in the BNL 80-Inch Bubble Chamber. The discovery completed a "missing link" in the sub-nuclear family and thereby confirmed the present theory of particle classification. University physics departments have found research with bubble chamber photographs to be particularly effective because it is possible to carry out the photographic analysis at their home laboratories.

The 15-foot bubble chamber will soon be placed in routine operation at NAL. An experimental program of several years duration has already been mapped out. The chamber will be used to study the interaction of many of the constituents of matter including the elusive neutrino.

## History Repeats

Last Tuesday marked the beginning of a new chapter in the Laboratory's history with the first off-site shipment of a radioisotope made in the BLIP.

On October 16, 1973 a sample of iron-52 was sent to the Nuclear Medicine Department of the National Institutes of Health in Washington, D.C. There it will be administered to monkeys as part of a study to evaluate its effectiveness in showing to the physician the locations in the body where bone marrow is actively producing red cells. Such information will be useful in diagnosing certain diseases which alter the bone marrow activity.

Until now, iron-52 had to be made in a cyclotron, and the most that could be made at any one time was about one millicurie. The BLIP (Brookhaven Linac Isotope Producer) is expected to change that and eventually permit preparation of hundreds of times this amount.

The BLIP, which is a tiny facility operated by the Department of Applied Science, is tucked between the 200-MeV Linac and the ring of the AGS (Brookhaven's Alternating Gradient Synchrotron), where it utilizes the excess capacity of the Linac. Protons that are not needed for the AGS are switched over to the BLIP where they bombard specifically designed water-cooled targets in which they induce spallation reactions in addition to more conventional proton reactions that can be produced in a cyclotron.

The relatively high beam current and the 'round-the-clock manner of operating the Linac together with the fact that 200 MeV is an optimum energy for utilizing spallation reactions all combine to make the BLIP potentially a prolific source of a tremendous number of "new" radioisotopes which until now had been available only in very small quantities. Thus, it will about triple the number of radionuclides that can be made available to the physician and others.

Operation of the BLIP is carried on by personnel of the Hot Lab Division of DAS as part of a very active program of developing radionuclides and new radiopharmaceuticals for medical applications. This work, in turn, is part of the Laboratory's integrated program in Nuclear Medicine which also involves the Departments of Medicine and Chemistry and the Instrumentation Division.

Radionuclides prepared in the BLIP will be incorporated into materials for their effectiveness as tools for diagnosing a wide variety of diseases. This effort involves collaboration with a number of groups at hospitals on Long Island and throughout the East and intense interdisciplinary cooperation at the Laboratory.

This week's shipment recalls the first shipments of processed radioisotopes from Brookhaven's Hot Laboratory made nearly twenty years ago. On August 30, 1954 the

(Continued on page 2)

## Hydrogen Energy Storage Program

A multiyear program directed at the development of a central station energy storage system based on hydrogen has been initiated in the Engineering Division of the Department of Applied Science. Word has just been received by DAS Chairman Warren Winsche that this work will be supported by the Division of Applied Technology of the Atomic Energy Commission at the level of \$300,000 in the current fiscal year.

The storage of electrical energy has been an important element in the operation of the nation's energy system, particularly in the past few years when electric utilities have had difficulties in satisfying the peak demands that occur during the afternoon and early evening hours.

The storage system under development at BNL would be used in the manner that pumped storage systems are now used by utilities. During nighttime and weekend hours, when the electric demands are low, generation plants that would otherwise be idle are used to produce electricity which in turn makes hydrogen by the electrolysis of water.

The hydrogen produced in this manner may be stored in a metal hydride, such as the iron-titanium hydride developed by R.H. Wiswall and J.J. Reilly of the Chemistry Division of the Department of Applied Science. The hydrogen is stored for use during the period of peak electric demand when it is reconverted to electricity by a gas turbine or a fuel cell.

Oxygen is also produced in the electrolysis of water, and this gas may be used for sewage treatment or other industrial purposes. Metal hydrides store the hydrogen by bonding it chemically which is a much safer and potentially cheaper way than storing it as a compressed gas or a very cold liquid.

This storage and conversion system can ultimately serve as a replacement for the oil-fueled gas turbine equipment that is now employed by utilities to serve peak demands. The Brookhaven program for this technology involves engineering design work, the development of techniques for hydrogen production, and the development of metal hydride storage equipment. The objective of the program is the demonstration of an integrated storage system with a power output of 50 megawatts.

Under a separate program, a small hydrogen storage unit capable of holding 10 lbs of hydrogen has been built for the Public Service Electric and Gas Company of New Jersey. The unit will be used in an electric storage test program by the utility. DAS personnel involved in the construction of this test unit include G. Strickland, A. Holtz, J. Hughes, and A. Wolke.

## Lahey Award to Papavasiliou

Dr. Paul S. Papavasiliou, the Attending Physician at The Hospital of Brookhaven's Medical Research Center received the Rowland T. Lahey Award by the Rho Chi Society at Wayne State University on October 15, 1973.

The award was given for his scientific contributions which include the introduction of neutron activation analysis into clinical medicine, the evolution of levodopa and of alpha-methyl dopa hydrazine as official drugs in this country, and basic investigations of the interaction between trace metals and catecholamines.

## IBEW Meets Oct. 25

Local 2230, IBEW will hold its regular monthly meeting on October 25, 1973, at 8 p.m. in the K. of C. Hall, Railroad Avenue, Patchogue. There will also be an afternoon meeting at 2 p.m. for shift workers in the Union office at 31 Oak Street, Patchogue. On the agenda will be regular business, committee reports, and the President's report.



After a three-year construction effort, NAL's 15-foot chamber was expanded for the first time on September 29. The resulting tracks were made a part of history through the above photograph.

First BLIP Shipment



While Tom Prach checks the radiation level, Bob Feindt loads into its shipping container Brookhaven's first off-site shipment of a radioisotope made in the BLIP (Brookhaven Linac Isotope Producer). The bottle contains a solution of iron-52 citrate destined for the National Institutes of Health (Washington, D.C.) where it will be used for bone marrow distribution studies. This shipment, made on October 16, 1973, nearly twenty years after the first iodine-132 shipment was sent from Brookhaven, marks the beginning of an era in which high current accelerators such as Brookhaven's 200-MeV Linac will triple the number of radioisotopes available in significant quantities. This will permit wider latitude in developing the best radiopharmaceuticals for diagnosing diseases.



At an in-transit conference on December 16, 1954 held to discuss composition of the first fluorine-18 (in the box on the ground) to be shipped from Brookhaven via air taxi from the old Mastic Air Strip (now the Brookhaven Town Airport). Shown left to right are Dick Adams, Paul Colsmann, H.O. Banks, Lou Stang, Manno Nelson, Walt Tucker, and an unidentified colleague of Nelson. Adams and Colsmann are with the Reactor Division, Stang and Tucker with DAS, and Nelson, the recipient of the fluorine-18, was with the Colgate-Palmolive-Peet Company, New Brunswick, New Jersey.



Two ex-Brookhavenites, H.O. Banks (left) and Hank Ruge, are shown readying the first fluorine-18 shipment from Brookhaven's Hot Laboratory on December 16, 1954. Speed was essential for getting this short-lived (110-minute half-life) material to its destination in New Brunswick, New Jersey.

(Continued from page 1)

first iodine-132 generator was shipped to the Mayo Clinic in Rochester, Minnesota, and 14 weeks later the first fluorine-18 was shipped to the Colgate-Palmolive-Peet Company in New Brunswick, New Jersey.

The fluorine-18 preparation was interesting because it utilized a secondary triton bombardment carried out in the old Graphite Research Reactor. The iodine-132 generator was important at the time because it was the first of a series of Brookhaven-developed generators which permitted short-lived radioisotopes to be shipped around the world and used many half-lives later.

In retrospect, the iodine-132 generator was most important because it led to the development and utilization of the technetium-99m generator which, in turn, was the biggest single factor in the rapid development of the field of nuclear medicine into the sophisticated useful widely practiced specialty that it is today.

**Christmas Club Notice**

Bankers Trust of Suffolk has announced that the last payment for the 1973 Christmas Club is due on October 23.

Arrivals & Departures

Arrivals		
William S. Morrison, Jr.	Chemistry	
Sonja Santos	Appl. Science	
Ressi Stewart	Medical	
Departures		
None		

CREF Unit Values

1972			
January	\$48.27	February	\$50.49
March	51.36	April	51.80
May	53.74	June	51.80
July	51.15	August	51.95
September	50.98	October	50.80
November	52.53	December	53.25
1973			
January	\$50.36	February	\$47.11
March	46.44	April	43.69
May	42.06	June	41.40
July	44.80	August	44.06
September	\$46.63		

Cooking Exchange

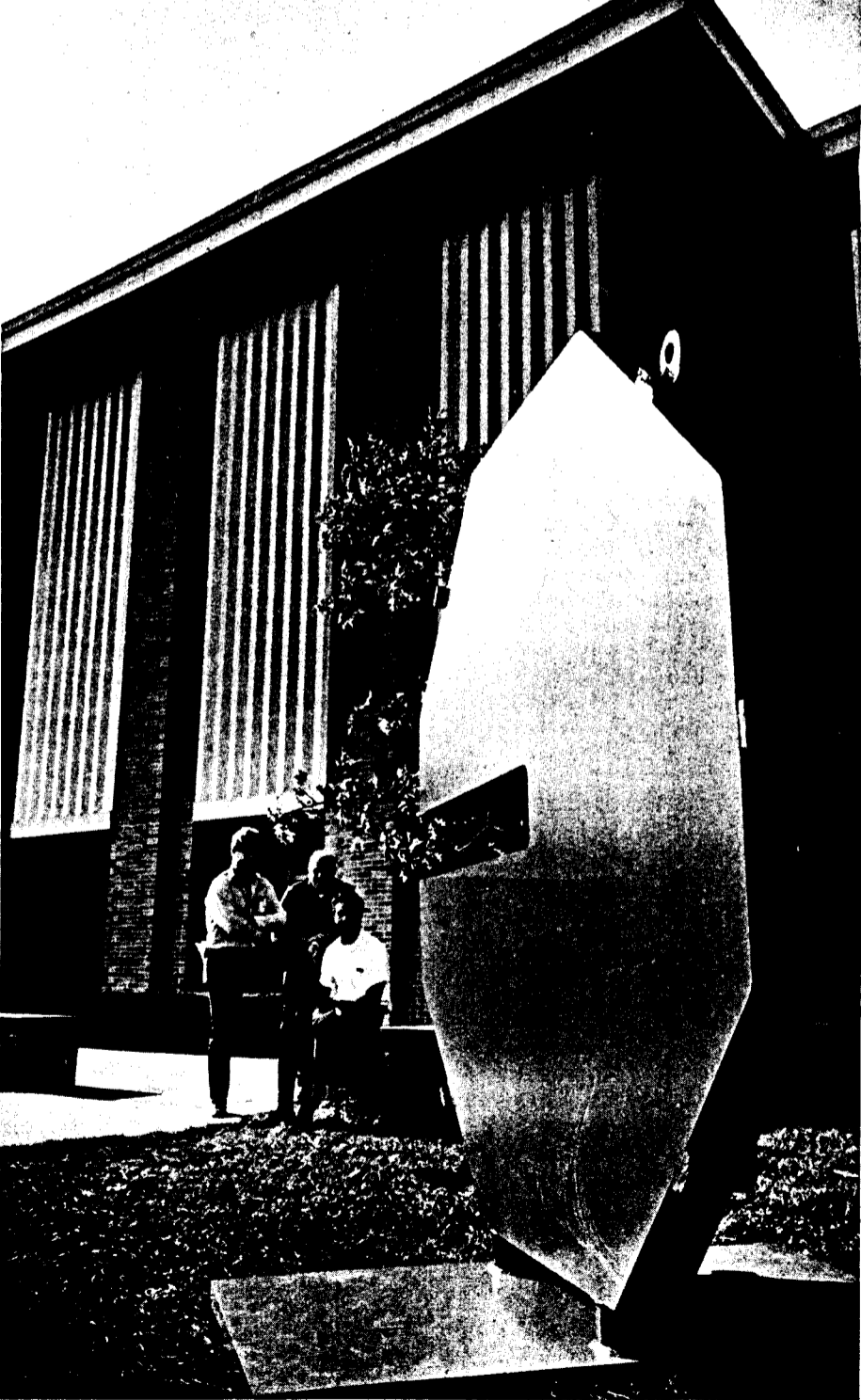
Jane Love

4 for \$2.00! Can you do it? That is indeed the question . . . and we have some ladies who are going to show us just how to make a delicious main dish for a family of four for \$2.00.



The date - October 24, place - Recreation Building, time - 12:30 to 2 p.m., price - 75¢ and 25¢ for each child to the sitter.

Come! See! Learn! Your family will be glad you did - me too!

AGS Exhibit



Bob Stafford, Jerry Bennett and Gerry Levine reflect on the message to be inscribed on a plaque affixed to this piece of dynamic sculpture in front of the AGS. The three men are initiating a program of exhibits and artifacts in and around the accelerator. The plaque will read "One of the 288 'blocks' which formed the magnet structure of the Cosmotron, the first proton synchrotron, the first particle accelerator in the GeV range, and the first major AEC peacetime research facility to be constructed. The Cosmotron was dedicated in 1952, and ceased operation at the end of 1965, having made possible many advances in man's knowledge of the sub-atomic realm."

**BROOKHAVEN BULLETIN**  
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Holiday Schedule —

The Tap Room at the Center will be closed Saturday and Sunday, October 20th and 21st; it will reopen Monday, October 22nd at 5:00 p.m. over the Veteran's Day weekend.

At the Cafeteria, only the Snack Bar will be open from 9:00 a.m. until 2:00 p.m. on Saturday, Sunday and Monday, October 20th, 21st and 22nd.

The Vended Food Service in Building 912 will be in operation throughout the Veteran's Day weekend.

Bank Notice

The bank on site, Bankers Trust of Suffolk, N/A will be closed on Monday, October 22 for Veteran's Day.

Safety Glasses

There will be no dispensing of safety glasses during the weeks of October 22 and October 29 due to the optician's vacation. For emergency dispensing of plano-safety glasses, contact the Health Physics & Safety Office, Ext. 4267.



Audrey Bangel, Reactor, beams with excitement as her number was drawn from the box. Other winners were: Joanne Horton, Physics; Kenneth Johnson, Plant Engineering; John Schmidt, Instrumentation; Michael Howley, Reactor; Chet Smith, Accelerator; Nola Rose, Plant Engineering; Louise Hicks, Directors Office; Stuart Shen, Applied Science; Richard Diem, Accelerator; Alonzo Werner, Accelerator; Ellie Kwiatkoski, Plant Engineering; Herman Geist, Plant Engineering; Shelby Williams, Plant Engineering; Richard Majestic, Physics; Bill Anderson, Accelerator; Steve Biemer, Plant Engineering and Sandy Earle, Directors Office.

Bowling News

Grace Fales

Red League

Star for the night of 10/9 was W. Reams of the Old Timers, rolling 219/205/203 for a 627 scratch/678 gross series, and winning his 2 Club Awards. Congratulations, Walt! Other highs were C. Buzzeo 201/223/605, R. Larsen 201/201, J. Scesny 200, S. Krei 214, and Joe Ferrante 201.

Green League

An outstanding night of bowling was led off by L. Jacobson 190/235/605 and J. Berech 211/220/606; both earning their Club Awards. R. Meier 219/202/585, E. Meier 218/222/592, C. Bohnenblusch 214, and R. Jones 210 came alive for the Sandbaggers who rolled a new high team series of 3180 to defeat the Neutrons by 321 pins (11-0). Want a few more? OK! A. Kreisberg 211, N. Combatti 204, C. Neuls 202, E. Sperry 202, and J. Ferrero 220. Omitted in error last week was S. Kiss with a 693 gross series for his Club Award.

Pink League

The 5th week of bowling proved to be a quiet night, with the Hopefuls the only team taking all 7 points. But then there are those who never quit: H. Caisey 197/495, E. Murgatroyd 172, K. Hunt 171, B. McGonigle 170 and G. Fales 161.

Black and Blue League

The teams lock like they are playing musical chairs with the standings. Each week we change, with each team taking their turn at first and last place. This appears to be a well-balanced league, it is not unusual to have tie games or less than a ten pin difference in a game or in total wood. Highs for 10/10: Ellie Murgatroyd 183/478, Marge Nekerman 175/502, Dick Murgatroyd 212, and Bob McCluskey 202/224/603.

Gym Closes Temporarily

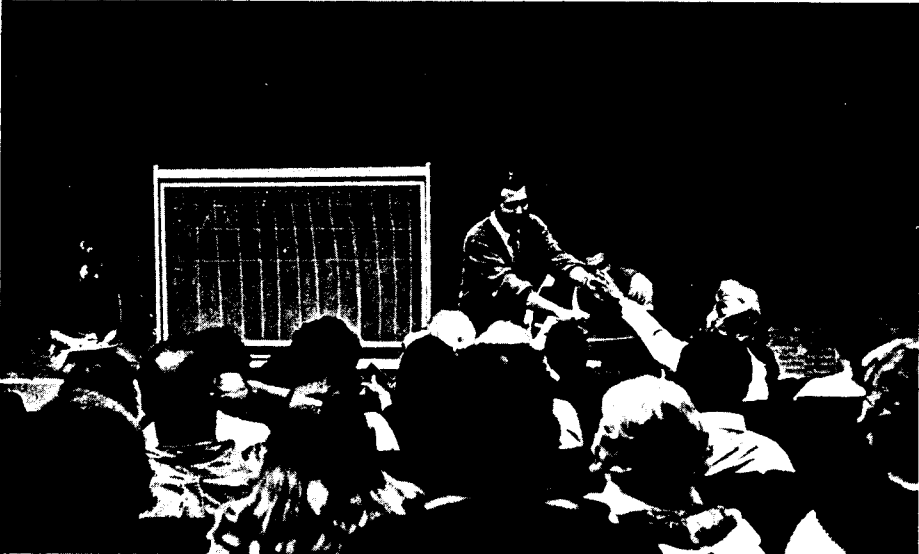
In order to prepare for the scheduled Visitors' Days, the Gymnasium will be closed to all athletic activities starting at 9:30 p.m. on Friday, October 19. Reopening date will be Tuesday, November 6.

Upon reopening, the Gym will be on the the following schedule:

<b>Monday-</b>	
5:00-9:30 p.m.	Mixed Volleyball League
<b>Tuesday-</b>	
5:00-7:00 p.m.	Judo Club
7:00-9:30 p.m.	League Practice (by reservation)
<b>Wednesday-</b>	
5:00-9:30 p.m.	Men's Volleyball League
<b>Thursday-</b>	
5:00-9:30 p.m.	Basketball League
<b>Friday-</b>	
5:00-7:30 p.m.	Soccer League
7:30-9:30 p.m.	Tennis (by posted self-service reservation)

**Note:** No general activities periods are scheduled at the Gymnasium.

Series Tickets



BERA President Charles Flood shakes up box containing 571 numbered slips as he prepares for drawing to give 18 lucky employees an opportunity to buy 2 tickets each to the 1973 World Series.

Football Notes

by Jack Brennan

Monday night's game had a mild upset as the Dirty Sox nipped the Slow Pokes 13-12. The Dirty Sox T.D.'s were by Tom Petty and Jim Curto; Curto also took in the big extra point. Flet Johnson and George Oldham had the Slow Poke's T.D.'s.

In the other Monday game Applied Math beat the Circuits 31-6. The Circuit T.D.'s were by Frank Haibon while the Math T.D.'s were by Leroy James (2), Walt Reams, Bob Bailey and Charles Brinkman.

Thursday night's game had A.M.D. beating the Slow Pokes 18-6 and the Dirty Sox beating the Circuits 14-7. Touchdowns were by Reams, Bailey and Alex Lumpkin of Math, Dennis Nordstrom of the Slow Pokes, Jerry Levine and Dean Easler of the Dirty Sox and Frank Stublefield of the Circuits.

	W	L
Applied Math	8	0
Dirty Sox	4	4
Slow Pokes	4	4
Circuits	0	8

Sonia Malkine Entertains Tuesday

For those who think French folk songs are limited to "Au Clair de la Lune" and "Sur le Pont d'Avignon," a sampling of Sonia Malkine's repertoire should prove otherwise. Miss Malkine, to appear at Berkner Hall next Tuesday evening (October 23) at 8:30, sings in the old French dialects of Provençal, Languedoc, and Breton, as well as in contemporary French (and occasionally in English). However, since she informally introduces each song in English, with a synopsis of the lyrics and comments on the origin and history of the song, all language barriers quickly break down, and everyone has a great time.

Sonia Malkine, who was born and educated in France, has performed extensively both there and in the U.S., and she appeared here two years ago. The forthcoming "Evening with Sonia Malkine" will again be sponsored by the French Group of BNL. Tickets, priced at \$2.50 for adults and \$1.00 for students, will be available at the concert.

Theatre Group Meeting

The BERA Theatre Group will meet in Room A, Berkner Hall on Wednesday October 24 at 8:30 in the evening. A biographical sketch of the life of Eugene O'Neill and scenes from his play "The Iceman Cometh" will be read. All are welcome.

The American Film Theatre production of "The Iceman Cometh" will be shown locally Monday and Tuesday the 29th and 30th of October at the Plaza Theatre in Patchogue. This is one of eight films of plays to be presented this year by the American Film Theatre Project.

Subscription information may be had by calling Eena Mai Franz, Ext. 4337 or Pat Campbell, 286-3675 or by writing the American Film Theatre, P.O. Box 230, New York 10046.

Wanted—Artists For Painting Exchange

It is time once again for the Annual Exchange of paintings that have been graciously loaned to the BNL hospital in the past. Throughout the year these paintings have given hope and joy to many of the patients. It is hoped that artists will be as generous this year in loaning their work as they have been in the past.

Paintings that were loaned this past year should be picked up Nov. 6 & 7 at the Occupational Therapy Room in the Medical Department. Work to be loaned for the coming year should be taken to the same place on those dates. All work must be framed, ready for hanging, and may be marked "For Sale," if the artist wishes. All paintings are fully insured by the Laboratory. Please remember that these paintings are to cheer the patients and should be suitable for a hospital room.

New participants in this Annual Exchange are most welcome. If you have work on loan that you are willing to leave, please notify Mrs. Brooks, 345-3684 before November 2. If you have questions or can recommend new participants, please call Mrs. Eleanor C. Dahl at 286-1592 or Mrs. Emily Czaja at 286-8448.

For those who have already received the South Bay Art Association newsletter, please note the change in date.

Entry Blanks For BNL Marathon and Bike Race Ready

Entry blanks for the Marathon and Bike Race are now ready and can be picked up at the reception desk in the Administration Building or from any committee member.

While the desired date for filing with the treasurer is Friday, October 26, late entries will be accepted at the starting line if accompanied by a reasonable explanation for the lateness.

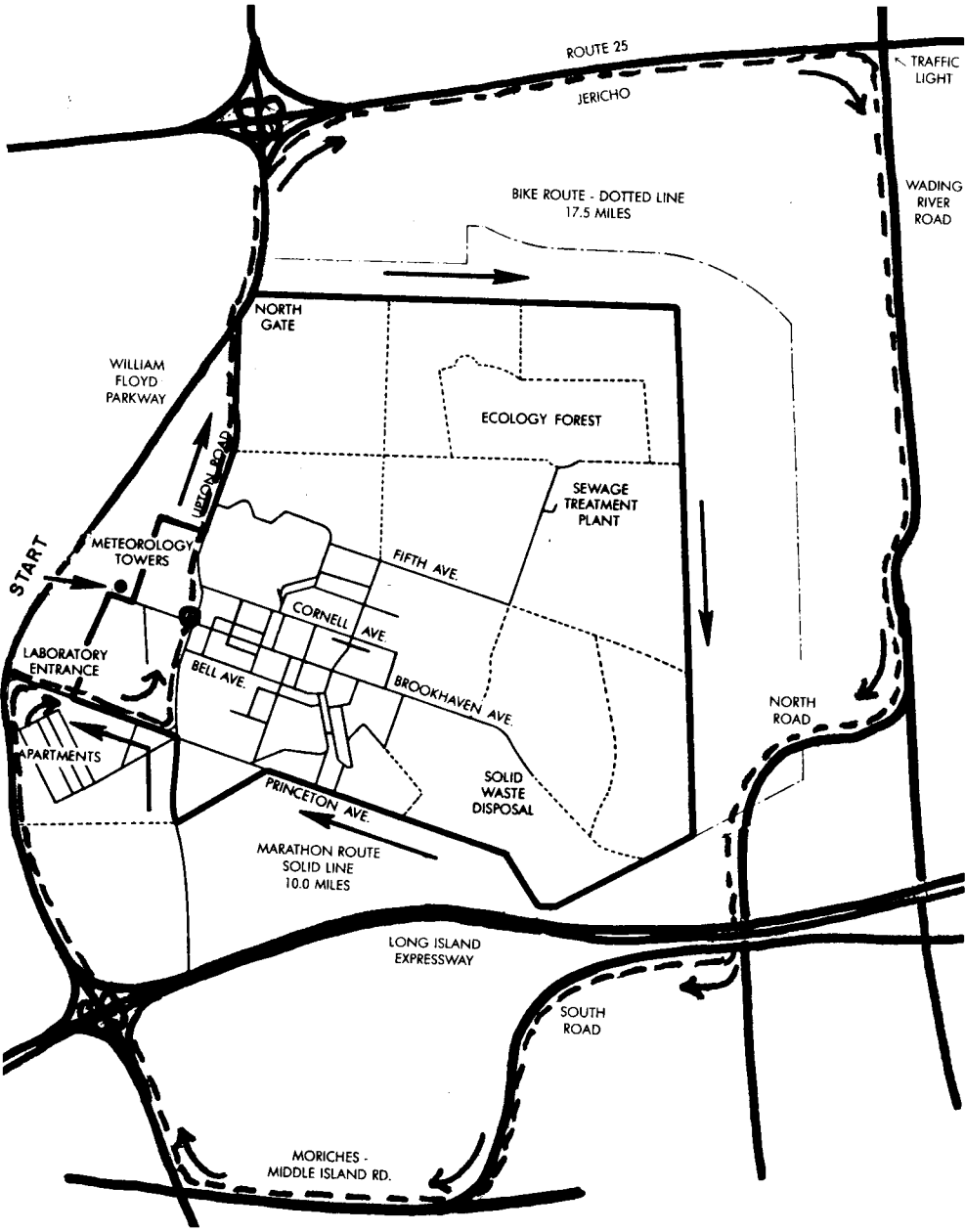
The course for the two races is detailed in the map printed below. The route for the Bike Race is mostly offsite, while the Marathon is confined to the Lab boundaries. The starting lines will be close together, both in the general area between Meteorology and the Carpenter shop.

Helpers are needed to mark courses and to man check points. Volunteers will be welcomed to help with these chores.

BERA Basketball Meeting

A general meeting for all persons interested in BERA basketball will be held at 12 noon on Wednesday, October 24 in the Personnel Department Conference Room. The agenda will include a discussion of the program for the upcoming basketball season.

The '73-74 BERA Basketball League is now being organized. Persons interested in playing basketball or in entering teams should call Lew Snead, Ext. 2544 or Dick Sutter, Ext. 3931.



BERA Golf

The golf season came to a close in September with exciting play in both the team league and individual league competition. In the team competition George Korhut and Joe Mayeski defeated Howie Gittleson and Tony Baltz for the BNL championship. The match was played at Spring Lake Golf Club with the winners taking a slight lead on the front nine. As they made the turn Korhut-Mayeski put on a spurt to close out the match on the 15th hole.

In the individual competition Marty Caunter and Les Lawrence went into sudden death play before Marty Caunter won on the 20th hole. Caunter went 4 up on the front side and looked in good shape but Lawrence came back to even it up on the back nine to force the playoff. Congratulations to the champions and the runners-up for their fine season.

September Tourney

The September Tournament was held at Spring Lake Golf Club with the following results. Low Net - Charles Flood (67), second and third low net was split by Jack Detweiler and Dick Hildenbrand (72). Low Gross - George Korhut (84), second low gross - Dick Hildenbrand (86). Closest to the pin was won by Dick Hildenbrand and the longest drive by Jim Petro.

Golfers are reminded that tonight is awards night at the Recreation Hall in the Apartment Area. Hope to see everyone for the end of season festivities. Members are asked to think about candidates for office and to notify Jack Detweiler or Jim Petro with their suggestions.

Cafeteria Menu

Week Ending October 26, 1973

Monday, October 22	
Snack Bar open – 9:00 a.m. to 2 p.m.	
Tuesday, October 23	
French Onion Soup w/ Croutons	
Kielbasy w/Sauerkraut & Mashed Pot.	1.00
Grilled Ham Steak w/Pineapple & 1 Veg.	1.10
Cheese Omelet w/Fr. Fr. & Bacon	.95
Wednesday, October 24	
Cream of Tomato Soup	
Braised Short Rib of Beef & 1 Veg.	1.15
Southern Fried Chicken & 1 Veg.	1.00
Broiled Fillet Cod & 1 Veg.	1.00
Thursday, October 25	
Chicken Noodle Soup	
Manicotti & 1 Veg.	.90
Roast Fresh Ham & 1 Veg.	1.10
Chili Con Carne w/Rice	1.00
Friday, October 26	
Fish Chowder	
Breaded Fillet & Fr. Fr.	1.00
Sauerbraten w/Potato Pancakes	1.20
Sagaburger w/Fr. Fr.	.95

Classified Advertisements

Placement Notices

Each week, the BROOKHAVEN BULLETIN lists personnel placement requisitions currently being processed. The purpose of these listings is, first, to give notice of all non-scientific staff positions being filled and, second, to give employees an opportunity to request consideration for themselves or others whom they wish to recommend to BNL. In filling vacancies, the Laboratory's objective is to give first consideration to present employees, as follows: employees within the immediate group having the vacancy, employees within the department or division, employees within the Laboratory as a whole.

For further information regarding a placement notice, please contact Employment Supervisor, extension 2874 or 2882.

REGISTERED NURSE - Permanent nights. Leading to position as Head Nurse Night Supervisor. Medical Department.

TECHNICIAN - Cryogenics experience. Design and Engineering Group. Physics Department.

SECRETARY - Office of Regulatory Assistance. Department of Applied Science.

TECHNICAL SPECIALIST - Temporary part-time position. Department of Applied Science.

DRAFTSMEN - Mechanical Engineering Division.

TECHNICIAN - Tandem Van de Graaff Operations. Rotating shift. Physics Department.

STAFF AREA SUPERVISOR - Staff Shop (Bldg. 510). Physics Department.

Autos & Auto Supplies

68 FIREBIRD PONTIAC 350 - Good cond. \$700. P. Kreh, Ext. 4028.

SNOW TIRES - 7.35x15", 4 ply nylon, w/w, very good tread. Richie, Ext. 4254, 734-7342 after 6.

70 REBEL - Auto, a/c, ps, r/h, V8, excel cond, single owner. \$1600. 286-0780 days; 286-8262 nights.

71 DODGE DART DEMON - 6 cyl, std, excel cond. \$1475. 286-9260 eves.

2 SNOW TIRES - G78x15 (8.25x15) fiberglass belted, w/w w/studs, mounted on Chevy rims, excel cond. \$20/ea. 732-5829.

14" WHEELS - For Ford products. \$7 pr. F. Meisenzahl, 924-3565.

71 HONDA CB-175 - 1500 mi, like new, elec start, windshield, luggage rack w/chrome util case, helmet, shift light indicators. \$500. 475-2557.

71 HONDA SL 350 - Road & trail, excel cond. \$650. 289-0524.

PARTS - For 67 Ford Country Sedan Station Wagon. George, Ext. 4612.

67 CHRYSLER NEWPORT - 2 dr, ps/pb, auto, new tires, runs well, needs body work on rt side. \$450 or best offer or trade or? 588-4766.

66 FORD FAIRLANE - 2 dr, 289 V8, auto, good cond inside, outside & mech. \$450. 281-4138 after 5.

69 PLYMOUTH FURY 3 - 4 dr hardtop, good cond, all the extras. 286-1493 eves.

72 PINTO - Auto, a/c, 28,000 mi, excel cond, new tires. \$1750. Ext. 2564.

69 CHEVELLE CONCOURS EST WAGON - A/c, excel cond. \$1595. 289-7453 eves.

59 FORD PICKUP - Needs work, spare bed & doors. \$75. 289-7453 eves.

68 CORVAIR - 45,000 mi, sacrifice. Ext. 3121.

65 DODGE DART - New tires, brakes & paint, 6 cyl std, \$450; pr 6.75x15 tube type tires, good tread, \$5. 473-3987.

70 BUICK STATION WAGON - Estate, gold, full power, a/c, loaded, mounted snows. \$1975 or best offer. 281-5251.

SNOW TIRES - 2 F78-15 WSW Goodyear 4 ply polyester on Ford rims, used 1 season, \$65/pr; 2 7.75x14 BW Vanderbilt on Mustang rims, \$30/pr. R. Dietz, Ext. 3059.

68 BUICK SKYLARK - 4 dr, ps/pb, auto, good cond. R. Walton, 286-8535.

64 SAAB - Trans rebuilt & never used, motor good, good for parts. \$40 or best offer. George, 698-6051.

Boats & Marine Supplies

18' GARVEY - Recently painted & ready for water, excel cond. 286-4851 after 6.

12' AQUA CAT CATAMARAN SAILBOAT - New 90 sq ft racing sail (dacron), good cond. \$350. Hichborn, 929-4133.

SCORPION - Fiberglass sailboat, 12', excel cond, safe. \$450. 286-0798.

2 FISHING CHAIRS - Folding, vinyl, padded, aluminum w/gimbals, like new. \$40 ea. 286-8633.

16' GARVEY - 5½' beam, fiberglass bottom, plywood & oak, practically new. \$450. 732-3296 after 6.

Miscellaneous

HAMMOND CHORD ORGAN - Model S6, bench incl, good cond. \$300. 929-4413.

COLT GOLD CUP CAL. 45 - \$160. John, Ext. 3354.

LAWN MOWER - Sears Craftsman, 22" self-prop w/catcher, guarantee good until May. Cost \$150 +, will sell for \$100. Ext. 2471.

DOUBLE TRAVERSE ROD - White, like new, never used. Paid \$13, asking \$6 or best offer. Marie, Ext. 2313, 744-2004 after 5.

FISH TANK - 40 gal, all glass, stand, hood, light, pump, Dynaflo filter, gravel. \$65. Saxon, Ext. 3435.

2 HOHNER ACCORDIONS - \$95 for large one; \$75 for small one. Les, Ext. 2449.

IRON RAILING - 4 pieces, 2 posts & fittings. Complete \$35. Ext. 2889, 325-1961.

2 IDENTICAL RCA 21" CONSOLE COLOR TV'S - One in working cond, other for parts. \$65/both, firm. Ken, Ext. 4003.

ELECTRIC WALL FIREPLACE - Red, new. \$70. Ken, Ext. 4003.

BATHROOM MEDICINE CABINET - 20"x30" w/mirrored sliding glass doors. \$15. Ken, Ext. 4003.

WATERPROOF BOOTS - Brand new, insulated to — 20°, perfect for work or winter sports, size 11C. \$45 or best offer. Rich, Ext. 3588.

SIAMESE KITTEN - Female, 2 mo old. Olness, Ext. 4581, 751-2655.

20" GIRL'S ROLLFAST BIKE - Very good cond, \$20; GE elec knife, good cond, \$25. Hichborn, 929-4133.

30-40 KRAG SPRINGFIELD RIFLE - Sporterized, Lyman sights, exc, \$75; Stevens 12 ga pump shotgun, exc, \$65. Hichborn, 929-4133.

10 SPEED ATALA BIKE - New tires, rims. Must sell. Orig price \$175, selling for \$110. Larry, 473-2193 after 4.

FAKE FUR - Off white by Glenoit w/matching turban hat, size 13-14. \$30. Irene Merritt, 589-5126.

GIRL'S DRESSES - Size 16, blue, like new, \$2; red jumper, brand new, size 16, \$3; summer dress, like new, colorful, size 14. \$2. Irene Merritt, 589-5126.

ANTIQUE OAK LIBRARY TABLE - Needs refinishing. \$50 firm. Irene Merritt, 589-5126.

COFFEE TABLE - Dark wood, attractive, sturdy, very good cond. \$10. Irene Merritt, 589-5126.

YARD SALE - Sat & Sun, Oct 20-21 - Misc household items incl pictures, handmade pine cone wreaths. 220 Jayne Ave, Patchogue.

GARAGE SALE - Oct 25, 26, 27 - Photographic, baby items, appliances, various other goodies. 283 Woodhull Ave, Port Jeff Station.

POLAROID COLORPACK LAND CAMERA - Excel cond. Cost \$40, sell \$20. Janet, Ext. 3379.

5' METAL FOLDING TABLE - \$5; 2 wood folding chairs, \$2.50 ea (like new); TV tray table, 50¢. Janet, Ext. 3379.

HEAVY DUTY PIPE VISE - \$5; 2 end tables & 1 round table, like new, \$40; 3 old square trunks, good, \$10 ea; wine press, \$22. 732-3338.

MIDGET WASHING MACHINE - \$10. 732-3338.

AIRDALE - Male puppy, 7 wks, champion sired, shots. John, 588-6947.

17" B/W TV - Motorola table model, very good cond. \$40. Ext. 3397.

ELECTRIC MEAT SLICER - Major No. 77, 5" serrated blade. \$25. Ext. 3397, 473-3205.

HOOVER APT-SIZE PORTABLE WASHER - Copper-tone, like new. \$75 or best offer. Jeanne, Ext. 3843.

WESTMORELAND STERLING - John & Priscilla pattern, service for 4, extra pieces in tarnish proof chest, never used, half price. \$75. Jeanne, Ext. 3843.

CRADLE W/STAND - Perfect cond. \$20. Georgina, 281-6362 after 6.

CREDENZA - Ital fruitwood, new cond, 52" w x 32"h. \$100. Steve, Ext. 3475, 281-4371.

OLDER REFRIGERATOR - Good working cond; Lg G.E. rotisserie broiler; kitchen chairs; elec hairsetter; ladies elec razor; wooden storm windows. 286-0376.

DRAPES - For living rm & den, call for description & size. Mary Smith, Ext. 4622.

ATLAS COACH CARRIAGE - \$20. 286-1097.

RCA PORTABLE TV - B/w, 18", picture tube OK but tuner needs repair. Best offer. 473-3986 eves.

PROPERTY - ½ acre, Rte. 13, Delaware, incl 70' mobile home. 325-1961 after 5:30.

DUCK DECOYS - 20 oversize plastic. \$20. 286-9485.

MOTORCYCLE HELMET - \$10; elec heater, \$10. Ext. 3800, 585-3794.

OAK FIREPLACE LOGS - Custom cut, split, delivered, stacked, well seasoned. Ken, 289-8212 eves.

3'x6' CYPRESS SASHES - Build your cold frames now for next Spring's planting, need painting. \$1 ea. 286-0246.

1925 PHILCO CONSOLE RADIO - Good playing cond, box of spare new tubes. \$50 firm. 286-0246.

21" REEL MOWER - Craftsman's best, excel cond. \$55; good hand mower, \$5. 286-0246.

SKI BOOTS - Like new, size 8½M, \$25; ski's w/Solo-man step in, quick release bindings, poles, all like new. \$35. 286-0246.

2 PR GIRL'S FIGURE SKATES - White, size 9, used 1 season, like new. \$5/pr. Walt, Ext. 4514, 286-0246.

PORTABLE COLOR TV - Sears, 19", 1 yr old, cost \$340. Asking \$200. Ext. 2474, 475-7227 after 5.

ANTIQUE BRITISH SHORT MUSKET - 577 cal, marked 1866 BSA, VR seal, very good + misc bayonets, 1880's to WWII. Joe, Ext. 4261.

HOTPOINT AIR CONDITIONER - Used 2 yrs, any reasonable offer, 5000 BTU. 744-3784.

CRIB - Walnut w/cane, modern design. Julie 269-4073, 744-7465.

2 BOX SEAT TICKETS - Jets and New England, Nov. 11, 1973. \$25/pr. Rosalie, Ext. 2456/2457.

BEDROOM SET - Like new, dresser, wall mirror, chest, full bed, headboard, night tables. \$195 or best offer. Ext. 3527, 345-3115.

CHEST - 4 drawer (grey); Shetland rug shampooer, \$20; child's vanity w/skirt & bench, \$5; ice skates (girl's), sizes 2, 4, 5, 13. \$3/pr. 473-3987.

ROUND BED - 84" w/satin sheets & cases, \$150; full size chord organ, double keyboard, \$550; wall mirror, 36"x64", \$40. 473-3987.

2 LWE VI SPKRS - Unfin w/pilot pwr amp mod SA-260 & Dynakit preamp mod DAS-2. \$130 all. Alley, Ext. 4847, 286-8305.

LIVING RM UPHOLSTERED CHAIR - High back, good cond. \$30; elec Kenmore iron, \$2. Ann, 286-2280.

BIKE SEAT - Childs seat for rear of bike. \$5. Barbara, 286-8633.

BEDRM SET - 4 pieces, dark pine, asking \$250; digital elec clock radio, AM/FM. Chris, Ext. 2441 Mon-Thurs, 286-9051.

SEWING MACHINE - Portable, Singer w/metal head. \$25. Tina, 744-7465.

RANGE HOOD FAN - Coppertone, like new. \$20. Tina, 744-7465.

BELT MASSAGER - Twin post constru w/2 belts & all instruc, like new. \$50. 744-2506.

DANISH SOFA - Teak, green upholstery, excel cond. \$100 or best offer. 286-3742.

TRAVEL IRON - GE, steam, brand new. \$10 or best offer. 286-3742.

LAWN MOWER - B-D elec, delux model, grass catcher + 100' cord, used 3 mo. \$65. 928-6538.

RUSSIAN COURSE - Records & books, never used. \$50. 928-6538.

RUG - Wool, blue/green, 9x12, \$20; lawn mower, self propel, needs tune up, \$15. 928-6538.

SURF ROD - Conv type, new, \$15; Penn 350 leveline reel w/150 yds new 30 lb test line, \$18. 744-2506.

DINING SET - W/4 chairs, \$35; RCA b/w TV, old but good, \$25. 542-3172 eves & wkends.

GIRL SCOUT UNIFORM - W/bow, belt & hat. \$6. 286-3709.

2 TICKETS TO RIGALETTO - Sat mat, City Opera, Oct. 27, \$7.95/ea. 928-0281 after 6:30.

Real Estate

Real Estate advertised for sale or rent is available without regard for the race, color, creed or national origin of the applicant.

For Sale

MASTIC BEACH - 2 bedrm Ranch, lg living rm, dinrm, eat in kitchen, full basement, Florida rm, garage, immaculate. Ext. 3499, 281-8349 after 5.

PORT JEFFERSON - 14 rm Farm Ranch, 6 bdrms, 3 baths, fam rm w/fireplace, cen a/c, 3 zone heat, 3 car garage. Low 60's. 473-3987.

PORT JEFFERSON - Old 2 fam, low taxes, 2 car garage, .6 acre, oil heat, needs improvements. Bob, Ext. 4621, 725-1841.

ROCKY POINT - Custom 4 bedrm Cape, finished basement, garage, laundry rm & appliances, beautifully landscaped, enc patio w/brick fireplace, private beach, low taxes. Must see. 744-9648.

BELLPORT VILLAGE - 3 yr old 4 bedrm Hi-Ranch, 2 baths, playrm, s/s, w/w, 2 zone heat, patio, utility bldg, 2 car garage, golf course & dock privileges. \$32,500. 286-0147.

CONDOMINIUM - Strathmore Ridge, 2 bedrm Ranch, carpeted, a/c, 5 mo old, Plan A. Leaving State. 924-3793.

For Rent

CENTER MORICHES - 2 bedrm, 4 yr old, clean elec heat, unfurn, immediate occupancy. \$190/mo, no lease. 878-2152.

Wanted

FURNITURE - All kinds, in fairly good cond, king size bed is of most importance right at the moment. Ext. 3155.

HOUSE TO RENT - 2-3 or more bedrms for less than \$130/mo, within 15 mi of Lab, all considered. L. Evans, Ext. 3419, 345-3019.

PIANO - For Senior Citizens Club. H. Henck, 281-5626.

HOME - For black Lab, male, 7 yrs old, AKC reg w/full pedigree. 363-6406.

TAKER FOR PORTABLE TV - Free, needs repair, 19". 281-7844.

CAMPBELL SOUP LABELS - Need 8000 asap for St. John Nepomucene School to get free projector. Mail to F. Chandler, Bldg. T-89.

FREE BLACK/WHITE PORTABLE TV - In working order for needy family. Sylvia, Ext. 2531, 744-8087 eves.

20 GAUGE PARKER DOUBLE BARREL SHOTGUN - 588-8610 eves.

WASHING MACHINE - Good working cond, reasonable. Ext. 2452, 473-1154.

MAN'S BICYCLE - In good cond. Ext. 3527, 345-3115.

BOAT TRAILER - Good cond for 16' runabout. 475-1254 after 6.

OCCASIONAL BABYSITTERS FOR HOSPITALITY COMMITTEE - On site and local areas. Jane Garron, Ext. 2113.

CUT FILM HOLDERS - Or magazine for 9x12 cm. Doug, Ext. 2382.

Services

SPIFFY YARD SALE - Placques & lots of other goodies. 113 Bay Road, Brookhaven, NY.

ORGAN LESSONS - Experienced teacher, theory incl, your home or mine. 924-3236.

HATHA YOGA FOR WOMEN - Relaxation, breath & body control through Yoga postures, sm classes, day or eve. 472-1397.

FISHERMEN - Do you want your catch smoked? Gerd, 744-9411.

TREE REMOVAL & CHAIN SAW WORK - Also light hauling, free estimates. Ken, 289-8212 eves.

TYPING - Theses, reports, etc. Susan, Ext. 3462, 928-6082 after 5:30.

PIANO LESSONS - Private or groups, also theory & harmony. 924-3303.

PORCH SALE - Oct. 20 & 21, fireplace tools, dresser, sewing machine, games + many other items. 95 Cherry Rd, Rocky Point. 744-7465.

Classified Ad Policy

Deadline is 12 noon Monday for publication Friday of the same week.

1. The Brookhaven Bulletin's classified section may be used only by active and retired Laboratory employees.

2. All items for sale or rent must be the advertiser's property.

3. Ads for material acquired for resale in association with a full or part-time business cannot be accepted.

4. Firearms offered for sale or trade may not be brought on site.

5. Ads not carried because of space restrictions will be held for publication in the next issue.

6. Ads are run only once and must be resubmitted if they are to be repeated.

7. Ads should be restricted to 20 words or less and typed or printed on the form provided, and must bear the employees signature.

☐ For Sale: Auto & Auto Supplies

☐ For Sale: Boats & Marine Supplies

☐ For Sale: Miscellaneous

☐ Wanted

☐ Carpools

☐ Lost & Found

☐ Services

Check ☒ the heading applying to your ad. Print or type your ad in 20 words or less.

Ads concerning property for sale or rent cannot be accepted on this form. Special Real Estate Ad forms are available at the Office of the Brookhaven Bulletin, Room 111, 40 Brookhaven Avenue.

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(Name & Phone No. To Call)

Employee's Signature ..... Life No. .... Ext. ....

Send to: Brookhaven Bulletin, 40 Brookhaven Avenue (Ext. 2345).